

ASSET InterTech – ITC 2010



ASSET
Creating the Embedded Instrument Ecosystem

EDA
- Mentor
- Cadence
- Synopsys
- SiliconAid

Semiconductor
- Intel
- Maxim
- Avago
- PLX Technology

EMS
- Flextronics

The background of the slide features a stylized globe with glowing orange and yellow energy trails swirling around it, set against a dark blue and green gradient. At the bottom, there is a depiction of a lunar or planetary surface.

Standardizing Open Tools for Embedded Instrumentation

The industry's first toolkit for the IEEE 1687 Internal JTAG (IJTAG) standard

What is the IEEE IJTAG Standard?

- **ASSET is executing the same strategy it used to help make IEEE 1149.1 boundary scan a success**
- **An access architecture and protocol for embedded instruments**
- **Creates the opportunity for a third-party tools market**
- **Tools will encourage embedded instrumentation innovation**
- **Embedded instrumentation is needed to address pressing T&M needs**
- **Ratification expected next year**

IJTAG: Turning T&M Outside-In

- What IJTAG provides:
 - Hardware architecture to access instruments on-chip
 - Standardizes the instrument interface communication types (6 total)
 - Instrument Connectivity Language (ICL) – on-chip network connections (think BSDL-like)
 - Procedural Description Language (PDL) – Programming for instrument operations (think STAPL-like)
- Creates a need for tools to access, automate and analyze embedded instruments

ScanWorks® Platform for Embedded Instruments

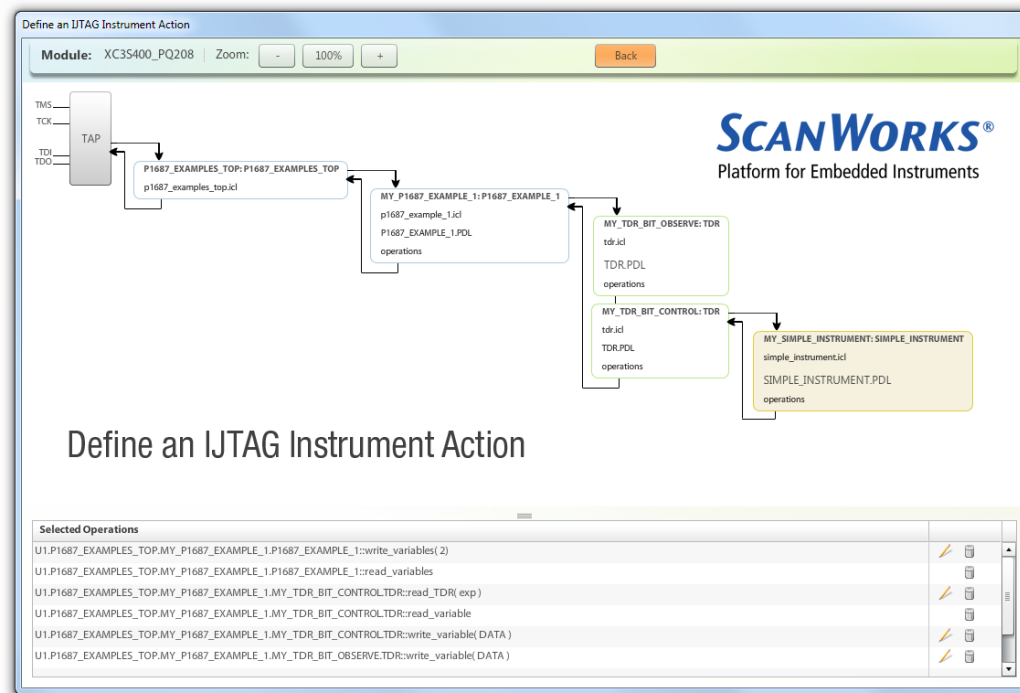


ScanWorks® IJTAG



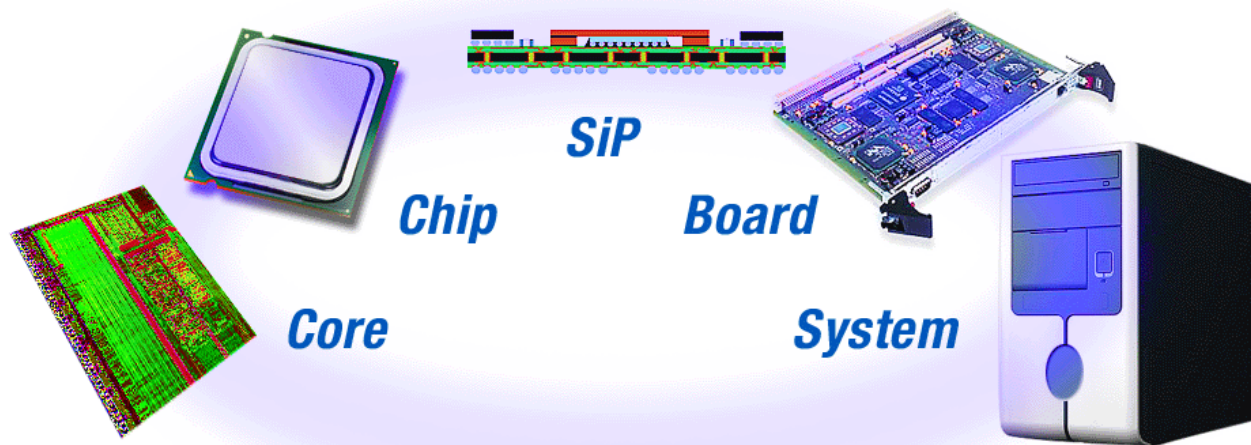
ASSET ScanWorks® IJTAG-DL Toolkit

- Developers License
- Tools to develop and use IEEE 1687 IJTAG-complaint instruments to validate, test & debug designs
- First tool to support both ICL and PDL languages



IJTAG Enables Life-Cycle Re-Use

- Chip design: characterization and debug
- Board validation: signal integrity
- Board test: structural test and functional test
- Field service: troubleshooting, the NTF problem



ASSET Ecosystem

● IJTAG helps bind together this ecosystem:

- OEM
- ODM/EMS
- ATE suppliers
- Chip suppliers
- Logic suppliers
- Memory suppliers
- Programmable device suppliers
- EDA suppliers



IJTAG – What it means?

- Where T&M is going: internal & non-intrusive
- Early adoption is already happening.
Momentum is building.
- Key drivers:
 - Today: Industry is moving to 10 Gb/s bus speeds →
NO TEST POINTS!
 - Tomorrow: SoCs
 - Near Future: 3D chips
- IJTAG is the connective tissue in a new ecosystem

How about a demo of the first IJTAG tools?



Driving Embedded Instrumentation